REMARKS

The foregoing Amendment and remarks which follow are responsive to the Final Office Action dated November 7, 2006, in which the Examiner rejected Claim 1 under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 6,834,472 to Huang (hereinafter "HUANG"), and rejected Claims 2-4, 7 and 20 under 35 U.S.C. §103(a) as being unpatentable over HUANG in view of U.S. Pat. No. 7,102,209 to Bayan, et al. (hereinafter "BAYAN"). Importantly, Claims 11-19 were allowed. Additionally, Claims 5, 6 and 8-10 were objected to as being dependent on a rejected base claim, but indicated by the Examiner to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant gratefully acknowledges the Examiner's indication of allowable subject matter in Claims 5, 6 and 8-19. However, for the following reasons, Applicant respectfully submits that all of the pending Claims 1-20 are now in condition for allowance.

By this Amendment, Applicant has amended independent Claim 1 to incorporate the features originally recited in Claim 2. Thus, as amended, Claim 1 describes each of the interposer leads as including a finger portion having a top surface which is exposed in and substantially flush with the top surface of the interposer body. Claim 2 has been amended to recite certain features originally recited in and stricken from the amended version of Claim 3. Claim 5 has been amended only to change its dependency to Claim 1. Finally, independent Claim 20 has been amended in a manner similar to that of Claim 1 to describe the finger portion of each of the interposer leads as having a top surface which is substantially contiguous with the nonconductive barrier means.

1. *Amended Independent Claim 1 is not Anticipated by HUANG*

In the subject Office Action, the Examiner rejected Claim 1 as purportedly being anticipated by HUANG, and rejected Claim 2 as being unpatentable over the combination of HUANG and BAYAN. As indicated above, by the present Amendment, the features originally recited in Claim 2 have been integrated into Claim 1. With particular regard to original Claim 2, the Examiner acknowledged that while HUANG shows interposer leads which each include a finger portion having an exposed top surface, HUANG ***fails*** to show that the top surface of the interposer lead is exposed in and substantially flush with the top

surface of the interposer body. In this regard, the Examiner relies upon BAYAN for its purported teaching of an interposer lead having a top surface which is exposed in and substantially flush with the top surface of an interposer body.

In Figure 5 highlighted by the Examiner, HUANG shows a leadless image sensor package comprising a lead frame 100 including a die pad 102 and a plurality of leads 104. Each of the leads 104 includes a top surface 104a which is larger than its bottom surface 104b, each lead 104 also including a half etched step-like structure 110 formed between the top and bottom surfaces 104a, 104b thereof. Attached to the top surface 102a of the die pad 102 is a chip 130.

The image sensor package of HUANG also includes a molding compound 124 which is filled into the gaps between the leads 104 and into the clearance 122 between the leads 104 and the die pad 102. The molding compound 124 is specifically described in HUANG as including a sidewall that partially defines a chip containing space 126. The chip containing space 126 is itself described as being capped and sealed by a transparent lid 142 that ***"is fixed to the top surface of the molding compound 124"*** by the use of an adhesive (see HUANG, column 4, lines 17-23). Thus, the explicit teaching of HUANG is that the ***"top surface"*** of the molding compound 124 is that surface to which the lid 142 is affixed.

As indicated above, in the subject Office Action, the Examiner concedes that HUANG fails to show the top surface 104a of each of the leads 104 as being substantially flush with the top surface of the molding compound 124. Indeed, as is readily apparent from Figure 5 of HUANG highlighted by the Examiner, the top surfaces 104a of the leads 104 are disposed well below the top surface of the mold compound 124. In an attempt to address this deficiency, the Examiner argues that Figure 5A of BAYAN depicts interposer leads having top surfaces which are exposed in and substantially flush with the top surface of an interposer body. Thus, the Examiner concludes that it would have been obvious to one having ordinary skill in the art to incorporate the teachings of BAYAN into the device of HUANG in order to have the top surfaces of HUANG interposer leads exposed in and substantially flush with the top surface of the interposer body thereof for wire connection.

In Figure 5A highlighted by the Examiner, BAYAN discloses a device comprising a die attach pad 131 and wire bond landings 132 which are each embedded in a dielectric material 164. Each of the wire bond landings 132 includes a top surface 166 which is

substantially flush with the top surface of the dielectric material 164 as well as the top surface of the die attach area 131.

Though BAYAN appears to teach a flush or coplanar relationship between the top surfaces of wire bond landings 132 and the top surface of the dielectric material 164, Applicant respectfully submits that one of ordinary skill in the art considering the teachings of HUANG would clearly not be motivated to combine the teachings of BAYAN thereto in the manner suggested by the Examiner. In this regard, eliminating the sidewall defined by the molding compound 124 in HUANG so that the top surface of the molding compound 124 is substantially flush with the top surfaces 104a of the leads 104 would completely destroy the character and functionality of the image sensor package of HUANG. Indeed, the sidewall defined by the molding compound 124 is needed to create the chip containing space 126 and to provide a support surface to which the lid 142 may be affixed.

Moreover, eliminating the sidewall defined by the molding compound 124 in HUANG based on the teachings of BAYAN would result in the failure of HUANG to satisfy the feature in Claim 1 regarding the interposer body having an ***"inner peripheral edge"*** which, along with the top surface of the die pad, collectively defines a cavity of the interposer. In this regard, the inner surface of the sidewall of the molding compound 124 in HUANG which would arguably satisfy the ***"inner peripheral edge"*** feature of the interposer body in Claim 1 is effectively eliminated if such sidewall is removed as needed to make the top surface of the molding compound 124 substantially flush with the top surfaces 104a of the leads 104. Thus, Applicant respectfully submits that it is only through the application of disfavored hindsight that HUANG could be modified in accordance with the teachings of BAYAN to render obvious independent Claim 1 as currently amended.

Based on the foregoing, Applicant respectfully submits that independent Claim 1 as amended is not rendered obvious by the combination of HUANG and BAYAN, and is in condition for allowance. Additionally, Applicant respectfully submits that Claims 2-10 are also in condition for allowance as being dependent upon an allowable base claim.

With particular regard to Claim 3, Applicant respectfully submits that neither HUANG nor BAYAN, considered alone or in combination, teaches or suggests an interposer lead including a protuberance which projects downwardly from a finger portion of the interposer lead, is oriented outward of an outer peripheral edge of an interposer body, and

defines a land. In this regard, as is readily apparent from Figure 5 of HUANG, any land defined by the bottom surface 104b of each lead 104 is clearly not oriented outward of the outer peripheral edge or outermost surface defined by the molding compound 124. Similarly, as shown in Figure 5A of BAYAN, the bottom surface 168 or land defined by each wire bond landing 132 is also not oriented outward of the outer peripheral edge of the dielectric material 164 (labeled in Figure 5A with the reference number 170), but rather is disposed well inward thereof.

2. *Amended Independent Claim 20 is not Rendered Obvious by HUANG and BAYAN*

As also indicated above, independent Claim 20 has been amended in a manner similar to Claim 1 to describe the finger portion of each of the interposer leads as having a top surface which is substantially contiguous with the non-conductive barrier means. Thus, Applicant respectfully submits that for the same reasons discussed above in relation to the amended independent Claim 1, independent Claim 20 as amended is also in condition for allowance.

3. *Conclusion*

On the basis of the foregoing, Applicant respectfully submits that the stated grounds of rejection have been overcome, and that Claims 1-20 are now in condition for allowance. Additionally, Applicant respectfully submits that the present response does not introduce new issues which would require further searching on the part of the Examiner, and therefore respectfully requests that the same be considered and entered by the Examiner. An early Notice of Allowance is therefore respectfully requested.

If any additional fee is required, please charge Deposit Account Number 19-4330.

Respectfully submitted,

Date: 1/8/07 By: _____

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